

ZOOLOG

Our cover shows a picture of the native Baneberry, *Actaea rubra*, photographed by Lawrence Stuckey in the Spruce Woods.

More photos identifying native berries and bushes may be found in **The 1972 Prairie Garden**, obtainable for \$1.50 from: The Prairie Garden, 92 Queenston Street, Winnipeg, Man. R3N 0W5

**Zoolog, Volume 13, Issue 1, Spring 1972**

**Publication of the Zoological Society of Manitoba and the  
Manitoba Naturalists Society**

**Editor — Dieter H. Schwanke**

**Associate Editor — Peter Press**

**Free to members of the Zoological Society of Manitoba and  
members of the Manitoba Naturalists Society**

**Mailed subscriptions \$2.00 per year. Single copy 60¢.**

**Reprints of Articles on request — send all inquiries to:  
Zoolog, Clandeboye, Manitoba.**

**Membership in Zoological Society of Manitoba — \$5.00  
Contributing membership — \$25.00**

# Do you have a personal goal worth planning for?

Most people do. And often it takes a lot of money to convert that dream into a reality. But people are funny. They somehow manage to keep postponing the financial commitment necessary to fulfill that goal. Until it's too late. Or else they find themselves saddled with a complicated investment scheme which they have neither the time nor expertise to properly manage.

Investors has the sensible alternative — a professionally managed financial programme designed specifically to meet your needs and desires. Trained financial know-how, backed by the top investment management team in Canada. That's Investors. One company with a complete personal financial service. It can make all the difference . . . for you.

Why not call Investors right now or write the Head Office at 280 Broadway, Winnipeg, Manitoba R3C 3B6 for information booklets.

*Investors*  
SYNDICATE LIMITED

- mutual funds
- pension trusts
- life insurance
- guaranteed certificates
- estate planning
- annuities

■ The Moneybuilders ■

# A Prairie Paddock

CLIVE ROOTS

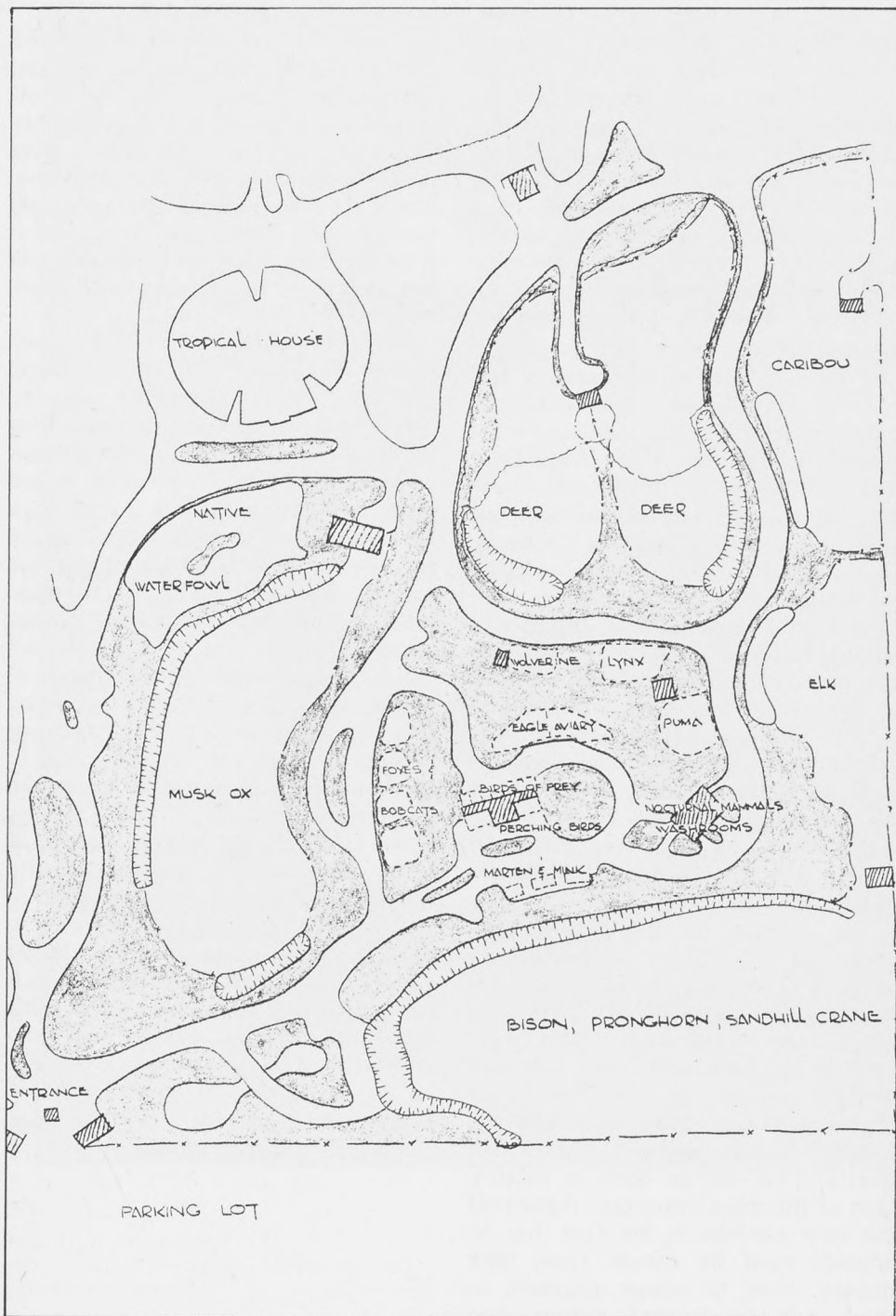
Although 1972 appears to be the year of the Tropical House, it should not be assumed that we have gone to the other extreme at the Assiniboine Park Zoo, and are concentrating upon delicate tropical exhibits. The new building certainly fills a definite gap in our attempts to achieve a balanced overall display in the Zoo. We are also conscious, however, of the fact that one of our major functions is to exhibit a complete range of native animals — basically Manitoba species, both animals which still live here and those which no longer find sanctuary in the province. As a result, the next major development at the Zoo will be a native animal display area, and work has already commenced on several displays within this area.

With approximately 20 species of native mammals, numerous waterfowl and several birds of prey on exhibition already, it may seem unnecessary to add to our collection of native species. But we have no accommodation for the nocturnal Skunks and Badgers, for Wolverines or Musk Ox, Marten and Mink, or even White-tailed Deer. Our Kit and Arctic Foxes, Bobcats, Sand-

hill Cranes, Hawks and Owls need permanent landscaped display areas. Our Eagles, both Bald and Golden are sadly in need of a relatively large flight aviary where they will have nesting facilities.

At present we cannot exhibit a comprehensive range of native birds, either migrant or resident. Jays, Grosbeaks, Ravens, Waders, Waxwings, Blackbirds, and dozens of similar species should have a permanent place in the Zoo. Our Wapiti need re-housing in a building and yards which will give us greater control over the dangerous stag, and a level paddock which hopefully can be kept green throughout the summer. Grouse, certainly the most difficult game birds to maintain in captivity, have never been exhibited here before, and will soon have a permanent display.

On the strength of these facts there seemed to be sufficient need to warrant construction of additional native animal accommodation, and what better than to locate all of these proposed rather simple structures within one area. In addition it seemed appropriate to consider transferring



some existing species to the new area, although they already have adequate housing in the Zoo. In this way the bulk of our native animals will be displayed in an area of approximately thirty acres, comprising a central core of cages and aviaries surrounded by several fairly large paddocks. It is expected that our indigenous species collection will eventually be the most comprehensive in the world.

With regard to moving existing groups to the new area it would obviously be unwise, unnecessary and of course financially impossible to move the bears, but in addition to the Wapiti, our Cougars, Lynx, Mule Deer and Pronghorn will be relocated. Their existing quarters will be used to house such exotic animals as Black Leopards, Clouded Leopards, and African Antelope.

The new area will be extensively landscaped and planted, but within the animal exhibits this will only be attempted in the cages and aviaries. It has been our experience that the landscaping of large mammal paddocks is futile in this climate, as they soon become quagmires. The existing well-established grassland in our Southeast corner will therefore be undisturbed in the major paddocks.

In addition to the two visitor-accessible structures, namely the nocturnal exhibit and the winter quarters for some of the migratory birds, most of the animals will be on view at all times, even in the depths of winter. Exceptions will be such creatures as the native waterfowl and Sandhill Cranes, whose mildly heated quarters will not be open to visitors. One of the most important features of the new exhibits is the fact that no animals need be moved from their display areas to winter quarters, as these will be located within their

permanent accommodation.

Another interesting feature of this area will be the system of storm water drainage, the ditches draining the whole area acting in places as animal barriers. The whole system drains into a large pool just south of the Tropical House. This will be the home of approximately two hundred ducks and geese, and it is hoped that many free migrants will join our birds for a few months each summer.

Where northern animals are concerned it is rather difficult to develop ecological or environmental exhibits, where groups of animals occupying the same niche can be housed together. The small carnivores must be caged separately, although we will endeavour to create a combined badger, skunk and flying squirrel reversed lighting exhibit. As we do not have unlimited areas for the hoofed stock we cannot allow the native deer to mingle or we would have trouble on our hands at rutting time. One method of avoiding this would be to pen the stags over winter, allowing the females access to them, but the size of paddock required to contain herds of Wapiti, Caribou, White-tailed Deer, Moose and Mule Deer could not be incorporated into our restricted space.

One area where we will be able to exhibit groups of compatible species will be the new Bison paddock, which can be viewed from the new parking lot, from Corydon Avenue and from within the Zoo. This paddock will also be shared by the Pronghorn, Sandhill Cranes and a colony of Prairie Dogs. A 'prairie' paddock indeed.



Photo by Elroy Limmer, June 1967.



# The Delights of Seeing

Selected photos by LILLIAN ALLEN

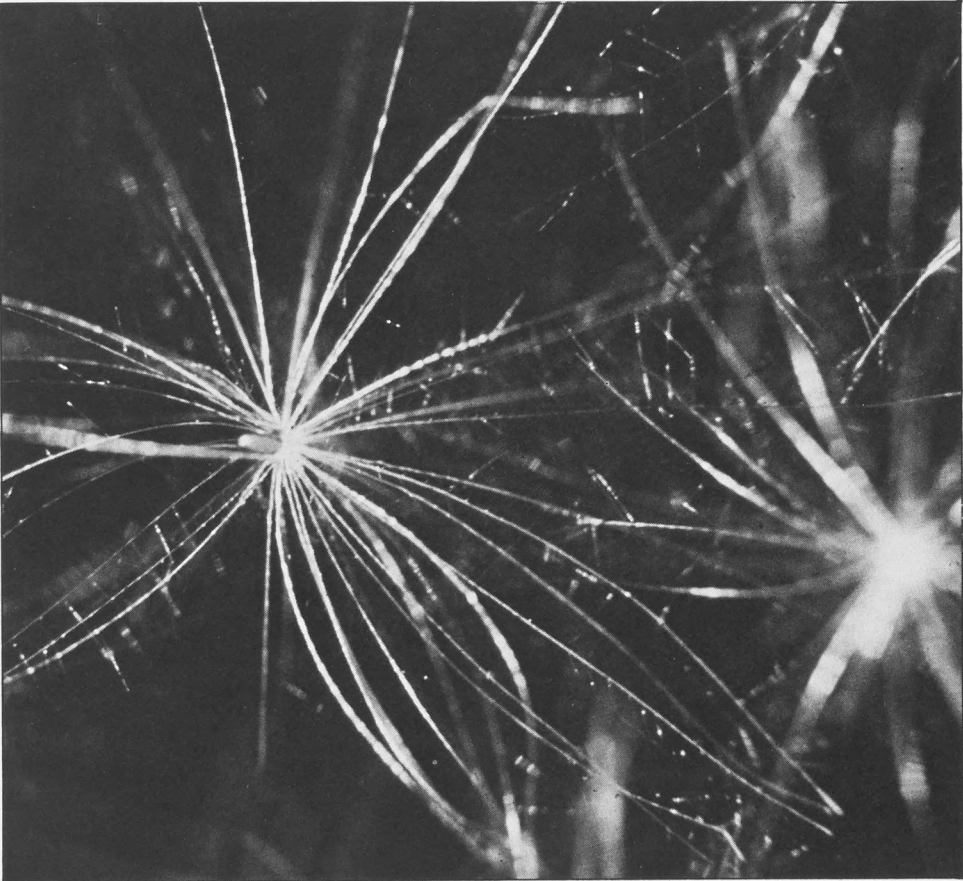


Window Frost at Dawn

Dandelion Seeds



Thistle Seed



Milkweed Seeds



# Snake Hibernacula

WILLIAM B. PRESTON

Manitoba Museum of Man and Nature

Photo by W. B. Preston, May, 1971



Courting Red-sided Garter Snakes. The largest snake is the female. At least five males are attempting to court her.

With the advent of warm spring days, the Red-sided Garter Snakes will begin to emerge from the hibernacula into which they retreated before the coming of winter. Like all other reptiles, snakes are ectotherms, relying upon environmental temperatures to maintain an optimum body temperature. This they do largely through behavioural responses, avoiding excessively high temperatures and basking in the sun when the temperature is low. In endotherms (endothermy=heat from within) — mammals and birds — a relatively constant body temperature is maintained through physiological responses regardless of the environmental temperature (within certain limits, of course). However, if the snakes are to survive the winter they must seek shelter below the frost line. Such a shelter is known as a hibernaculum.

The hibernacula are generally located in natural crevices such as sink holes or in crevices in cliffs, outcrop rocks or in talus slopes. Animal burrows may be used: for example, Prairie Rattlesnakes must make use of abandoned Prairie Dog burrows; garter snakes have been found hibernating in crayfish burrows. Stuart Criddle once found 257 snakes representing three species hibernating in an ant hill near Treesbank, Manitoba. Constructions of human origin, such as stone walls, dams and such, have been used.

A particular hibernaculum or den may be used for many years, by generations of snakes. There is some evidence that individual snakes return to the same den year after year. What determines the choice of a particular den site is open to speculation.

As suggested above, hibernaculum populations are not necessarily limited to one species. In the ant hill hibernaculum Stuart Criddle found Plains

Garter Snakes (*Thamnophis radix*), Red-bellied Snakes (*Storeria occipitomaculata*) and Smooth Green Snakes (*Opheodrys vernalis*). I have found Garter Snakes (*Thamnophis sirtalis*) in company with Blue Racers (*Coluber constrictor*) and Gopher Snakes (*Pituophis melanoleucus*) in the dens of the Northern Pacific Rattlesnake (*Crotalus viridis oreganus*) in British Columbia. In Denmark three other species, two lizards and a toad, have been found hibernating with European Vipers (*Vipera berus*).

During hibernation the snake's metabolic rate is very low. Some snakes may succumb during the winter due possibly to freezing if they are not below the frost line, possibly to insufficient food during the previous summer and possibly to unknown reasons.

In southern Manitoba approximately seven months of the Red-sided Garter Snake's year are spent in hibernation. In Kansas, about 100 miles farther south, the dormant period for this species is about five months in duration. On emergence from hibernation courtship and mating take place, generally in the immediate vicinity of the den. Males are attracted to the females by odour and several may attempt to court the same female. The female will generally accept a male only once and then leave the vicinity. The males may remain to court other females.

In Manitoba, particularly in the Interlake region, several very large hibernacula, in terms of numbers of snakes, are well known. Several of these dens are currently being studied by investigators from the University of Manitoba. There is much to be learned of the private lives of snakes and possibly some of the best opportunities for this exist here in Manitoba.



# The Doomed Dunelands

ROBERT N. WALDON

*Recreational development is a job not of building roads into lovely country, but of building receptivity into the still unlovely human mind.*

In these brief words naturalist Aldo Leopold summed up two uncomfortable truths about the rising public demand for outdoor recreation and the shrinking acreage available for it. He dismisses, for the folly that it is, the practice of exposing ever more land to the destructive activities of mechanized Man-at-play. And he affirms that the only way to halt the mindless roads-to-ruination cycle is through education.

In the past there have been many heroic efforts by dedicated people to stop the spread of destructive land use. Most of these actions were aimed at the agents of abuse, and as they generally lacked the backing of the public at large, they have at best been delaying actions. Examples abound — of wildlife refuges becoming community pastures, parks turned into cutover wasteland, erstwhile wilderness areas throbbing to the tune of the internal combustion engine.

Here in Manitoba there is an area of duneland located 100 miles west of Winnipeg. An ice-age deltaic deposit of sand, covering 485,632 acres<sup>1</sup>, forms a prairie-desert parkland largely consisting of wind-formed, stabilized dunes. The sparse, wiry ground vegetation is interspersed with clumps of aspen, white spruce and oak to create a pleasing landscape unique in Manitoba. In the southern portion of these dunelands, just north of the Assiniboine River, are the Bald Head Hills, an expanse of large, active sand dunes, the area's most arresting physical feature. It is here that the unhappy consequences of heavy, uncontrolled recreational use can be seen at their worst.

The wind creates its distinctive patterns on the surface of the open dunes of the Bald Head Hills. Isolated clumps of grass are among the first colonizing plants that begin the process of stabilizing the shifting sand.

1. Report of Reconnaissance Soil Survey of Carberry Map Sheet Area (1957); Ehrlich, Poyser and Pratt.

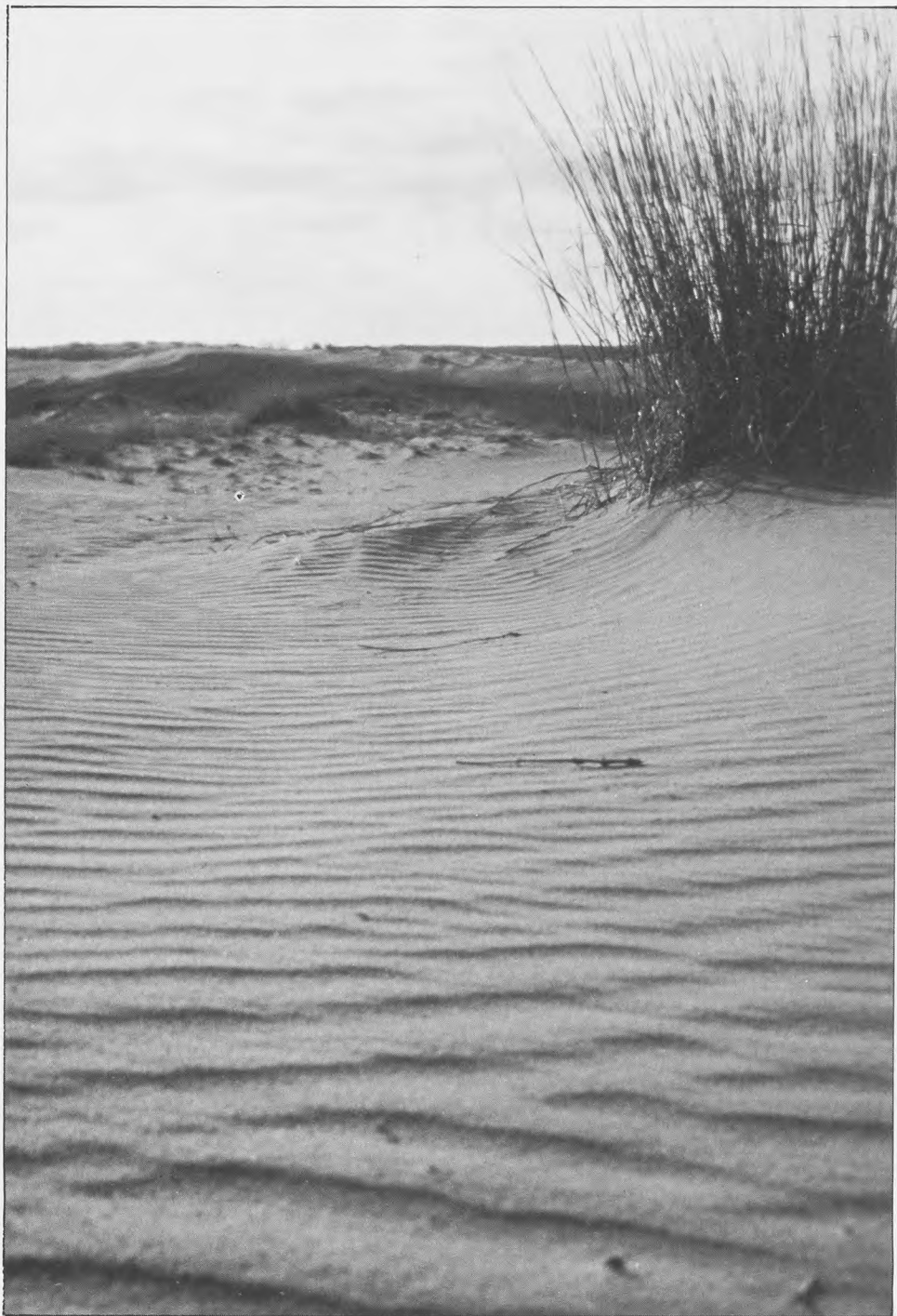


Photo by R. Waldon, March 1966

The involvement of mankind in the dunelands began honourably enough, if we can judge by the clues that have been uncovered to date. Flint hunting points suggest that the first visitors to the banks of the Assiniboine south of Carberry were Paleo-Indians from much further south, and that they came calling eight to ten thousand years ago.

They were a primitive lot, uneasy pedestrians in a land they shared with fleet-footed, tough-hided game animals. And no doubt in the eyes of the district's largest predators, they themselves were regarded as game. The tourist trade then featured a degree of elemental democracy it now lacks, some would say regrettably.

If we skip a chapter or two in the chronicle of the dunelands, we come directly to modern man. Unlike the earliest wayfarers, shivering in the chilly winds off the retreating glaciers, this visitor is master of all he surveys. So formidable has he become, indeed, that he has lost altogether his sense of place in the natural world. But he hasn't lost his essentially paleolithic marrow. Behind the heavy masquerade of technology is the same animal who came to the dunelands eight thousand years ago to play the game of eat-or-be-eaten with his four-footed contemporaries.

Oddly enough, the dunelands is one of the few places left in Manitoba where the countryside still bears a close resemblance to what it was back then. By the same set of standards that has rendered every square foot of the adjacent prairie lands unrecognizable, this land has until recently been judged too poor to even bother building all-weather roads through. The soil is far too light and sandy to farm, and the wiry grass too thin to suffer the customary overgrazing. In places where

it was economically feasible, of course, logging took its toll.

In 1910 the Canadian Army began using the south-western portion for training grounds. Since 1933 the Department of National Defence has held lease to a substantial tract of land which now totals 96,000 acres. Military activity has created its own form of disruption within the training area. But much of the dunelands has escaped sustained exploitation.

As a result the area is blessed with certain features that have long since been obliterated elsewhere in southern Manitoba. There is a herd of Elk, a few Moose, rumours of a Wolf or two, and some examples of rare plant species. And there's tranquility, if you don't mind the occasional low rumble of distant artillery practice.

The almighty hand of progress has just recently descended with full force upon the heart of the dunelands. It came in the form of Provincial Highway 258 which linked Carberry and Glenboro with pavement sometime in the late sixties. The highway passes within a mile of the Bald Head Hills. Then in 1970 a major new trailer park and camp facility was opened adjacent to the point where the highway crosses the Assiniboine.

The advent of the twentieth century in these peaceful hills was looked upon with some anguish by those who have grown to know and cherish their unique beauty. These few people clearly realized that the great problem with letting a bull into a china shop is that the place is forever after unfit for anything else except more bulls.

To the left of the photo is a steep-sided basin which was part of a trail bike circuit last fall.

This damage took place in the space of one weekend.

Photo by R. Waldon, April 1972



Photo by R. Waldon, April 1972



This discarded tin can was picked up as a cleanup gesture before it was realized its position beside the deer tracks said something. Hence its disturbed setting.

Initial pessimism about the effects of the new road upon the heart of the dunelands has been amply justified by what has happened along the south-east edge of the Bald Head Hills, about a mile west of the tourist camp. Trail bikes, all-terrain vehicles, and that flagship of the rip-and-roar fleet, the dune buggy, have gouged a network of meandering ruts over the stabilized dunes. The light sandy soil is so unstable that in places the traffic has killed even the tenacious junipers, a sudden and sorry end for a shrub capable of surviving for four or five centuries. Most of this damage took place in the summer of 1971.

The effect of heavy escape-vehicle activity, in addition to the damage it does, is that non-motorized visitors will be discouraged from going to the dunes. People willing to use the unaided human foot — one of the quietest and least destructive all-terrain vehicles yet devised — will not return if they find they are expected to commune with nature in a place that resembles the infield of a dirt track speedway.

The answer would obviously be to bar vehicles entirely from all but the highway itself. Even in the unlikely event that any government agency were willing and able to enforce such a restriction, there is a jurisdictional problem. The area to the west of Highway 258 along the north of the river, and including the Bald Head Hills, is under military lease. Proposals made by the Provincial Parks Branch to the Department of National Defence that

the Bald Head Hills, an area of about four square miles, be included in the adjacent Spruce Woods Provincial Park have not to date brought any change in the status of the open dunes area.

In response to the heavy tourist traffic the DND last year erected "No Trespassing" signs along the vehicle tracks leading west from the highway towards the Bald Head Hills. These signs warn trespassers of unexploded bombs and artillery projectiles.

According to DND regulations those wishing to enter the military lease must receive written permission from CFB Shilo, and in their application must state the exact time and location of the visit. In cases where permission is sought by large groups such as school classes, Shilo dispatches several men and a vehicle to accompany them.

But it appears from informal on-the-spot enquiries that the great majority of visitors are totally unaware that they should have specific permission to visit the Bald Head Hills, and that they are unimpressed by the posted warnings about lurking explosives.

Until 1967 all of the reserved land in the area was included in the Spruce Woods Forest Reserve. In that year the Province created the Spruce Woods Provincial Park. The Park consists of those portions of the old Forest Reserve lying to the east of Highway 258, plus acquisitions of land to consolidate the block into its present area of 90 square miles.



By the time the children on the top of the ridge are another five years older, the advancing face of the dune will have engulfed and killed the white spruce at its feet.

Photo by R. Waldon, October 1971

Photo by R. Waldon, October 1971



This is part of a school group from Winnipeg that visited the Bald Head Hills in October of 1971. In the background to the left of one of the guides, Dieter Schwanke, is a dune bearing a set of the ever-present vehicle wheel marks.

The actual boundary between the Park and the land in the military lease runs parallel to the highway and about a quarter mile to the west. Here the sharply-contoured valley escarpment provides some striking contrasts, virtually side-by-side, between riverbottom and upper dune plant communities. Several high vantage points afford an expansive view eastward of the Assiniboine valley, with the twin crescents of an oxbow lake curving out and away from the foot of the escarpment immediately below.

It is in this narrow corridor between the highway and the lease boundary that a group of people, most of them from Brandon, have laid out a route for a nature hiking trail. It begins at the point where the highway tops

the north bank of the valley, goes westward for several hundred yards along a firebreak trail and then south along a road for perhaps a half mile. At this point there is an exceptionally high prospect hill. From here one can return to the starting point via game trails that run along the brow of the valley overlooking the oxbow lake. Or, time permitting, proceed on to the Bald Head Hills to the south-east.

It is the intention of the Brandon group to lay out the trail with point-of-interest markers and to print a guide brochure keyed to these markers and describing the more easily-identified plants and other features of interest. The trail, and the guide brochure, are intended primarily to answer the need of school excursions to the dunelands.

The Brandon group is headed by Dr. Gordon Senoff of the Department of Education of Brandon University. The suggestion for the trail came from Lawrence Stuckey, a well-known Brandon photographer and amateur

botanist intimately familiar with the dunelands. In 1971 he had assisted several groups of Winnipeg school children on trips to the Bald Head Hills and had become concerned that the great educational potential they offered was not only going to waste, but was in imminent danger of being completely destroyed. His concern was heightened by the continuing uncertain jurisdictional status of the area, and the probability that if it remained a kind of no-man's-land the current level of abuse could only increase.

The open dunes and the immediately adjacent areas do qualify superbly as open-air classrooms. There are contrasting plant communities in close proximity to each other, with consequent variety in bird and animal life. Perhaps best of all, from the point of view of teachers attempting to introduce children to the lost art of observation, the fine sand of the open dunes records the tracks of every passing animal with exciting fidelity. Even insects leave distinct trails.

In few other places can one find so interesting a lecture theatre. For this purpose the dunes are perhaps the most valuable piece of terrain in Manitoba.

It is encouraging that the group under Dr. Senoff has rallied voluntarily to the cause of environmental education. By so doing, it is attacking the root cause of this society's repeated failures to implement non-destructive land use practises. The public's insurmountable indifference is insulated by ignorance of the value of undisturbed land, or even of what undisturbed land looks like.

In taking direct action this group has avoided the common error of taking it for granted that some government agency or other is looking after everything. Assuming the purest of



Photo by R. Waldon, October 1971

Lawrence Stuckey of Brandon, photographer and botanist, shares his extensive knowledge of the dunelands with members of a school group from Winnipeg.

intentions on the part of the government bureaus administering wild lands it must be borne in mind that their resolve can be only as strong as the politicians of the moment will let it be. Faced with pressure from exploitive interests, or feeling the need for statistics telling of so many miles-of-road paved, so many more picnic sites bulldozed out, the politicians will invariably force a compromise because there is no countervailing body of voter opinion to be feared.

The idea of salvation-through-education may seem to be too remote and tenuous a proposal, aimed as it is at children who won't become voters for some years after they get the word. It might help to point out that the school children, whose tours sparked the nature-trail idea in Lawrence Stuckey's mind, proposed and organized the trips themselves. With grudging permission from school administrations, and at best only token financial backing, (in most cases none whatever) they persisted on their own initiative to carry out the tours.

Out of the unhappy situation of the Bald Head Hills, and the small but well-aimed endeavour by Dr. Senoff's group, there emerge several suggestions that could be taken up by all environmentally-oriented citizens groups in Manitoba, and worked at in unison.

One possibility could be the formation of a small but active group whose specific function would be to monitor the government's road-building program, and to report on these *while they are still in the planning stages*. Perhaps, if such a group had been in existence in the early sixties, the highway from Carberry to Glenboro would not have been built, or not built where it is now. The need for a north-south road connecting those two small towns could have been

The highest vantage point along a proposed nature trail in the Spruce Woods Provincial Park affords a striking view eastward of the Assiniboine Valley and one arm of an oxbow lake.

Photo by R. Waldon, April 1972

questioned with considerable validity. Neither provides a market or shopping area for the other. Both have excellent highway connections with their market centre, which is Brandon.

As the Spruce Woods Park to the east of the highway is "developed" there will no doubt be loop roads included in the plans. It could be debated whether access in depth by car into any recreational area should be encouraged. People tend to conduct themselves in a manner that they think is expected of them. If you build a road, they will limit their sightseeing activity to rolling down the windows of their cars. If you build a road to a parking lot and interpretive centre on the edge of a recreational area, and extend hiking paths or marked trails from there into the area, the effect will be to greatly encourage visitors to take up hiking.

Although the initial reaction to a parking-lot-hiking-trail facility would likely be negative — it is difficult to get mechanized man out of the security of his upholstered, four-wheeled isolation booth — over the span of several seasons the idea might become acceptable. Witness the rising popularity of canoeing and cycling. The advantages of hiking, in terms of physical health, educational benefits, and the far less wasteful use of recreational land, are self-evident.



There are other aspects of recreational land use, in addition to the road-building already discussed, which would benefit from the attentions of a non-exploitive, non-political group representing all environmentalists in Manitoba. Not only would they be able to muster public opinion in support of the environmentalists' views, but they would provide a useful gathering point for information on the activities of various levels of government. Anyone who has attempted to sort out the jurisdictional tangles that collect around many aspects of land administration will understand the clear need for this service.

If a concern over current recreational land use practices is to result in more than frustration for environmentalists, a move to co-ordinate and

unite all naturalists in the province is needed immediately. A focal-point for co-ordinated action exists in the Spruce Woods. It appears that a change in the status of the Bald Head Hills will not come about without considerable pressure brought to bear by the public upon the politicians in Ottawa. It appears that further road-building into the Park will be carried out unless there is a demonstrated wish for an alternative brought to bear upon provincial politicians. And it appears that school children will continue to be discouraged from going to the Bald Head Hills until school boards are confronted with ratepayer-naturalists who can bring them up-to-date on the need for encouraging environmental awareness.



# What Value an Eagle?

JOHN JACK

"Quick, look left!" I woke from the half sleep of a warm spring afternoon to see the big bird, dark bodied, with white head and tail flying toward the nest, built on the fork of a poplar tree about sixty feet above the ground.

We were in Riding Mountain National Park. Only a sitting bird's head could be seen above the rim of the nest. Would she move off so we might get a picture? Would her mate come with food? We waited, but no luck. Lunch time came and went, still the eagle didn't stir. One becomes drowsy on a warm spring afternoon, but the shout brought me to life.

The incoming bird circled the nest a few times and landed on a bough nearby. Meanwhile his mate left her place and he hopped over to take a turn warming the eggs.

These were the first of the species we would see during the summer.

The Bald Eagle is a handsome bird, larger than any of the hawks, soaring on a wingspread of six or seven feet. His diet is principally fish, so this eagle is found near the lakes and larger rivers of our province. The nest,

constructed of sticks and grass, usually is in a tall tree not far from the water.

Nesting about April, the parents, who mate for life, take turns covering the clutch of two or three eggs, and it was this change-over we had observed. The young hatch in about five weeks. Their first coat which is white and downy is replaced in about three weeks by one of heavier woolly brown. Full feathering comes at about two months, but the birds require four years to attain the pure white head and tail.

Our next sighting was in mid August on a lake in north-western Ontario. The sun glistened on the white head of a beautiful adult bird occupying a tree top on a small island. He wasn't to be disturbed as our canoe passed a quarter of a mile away.

The third observation occurred in early September on the Manigotogan River which enters Lake Winnipeg about fifty miles north of Pine Falls. There a family of four eagles followed as we travelled down river. The adults and a juvenile stayed with us throughout one day. Although the

birds kept their distance, the distinctive white heads and tails of the adults could be seen. The young birds showed dark feathers mottled with white on underparts and wings. They soared ahead of us, wings flat out, an identifying mark of eagles.

Next morning just one young eagle remained. He perched near the top of a tall tree, flying off as we approached, circling, soaring, then going ahead down the river which flowed between stands of wild rice, and from which flocks of Mallard Ducks rose. Towards evening a Moose and her calf moved leisurely into the woods as we came near.

On the third day there was no sign of the young eagle until mid morning, when rounding a bend we surprised him sitting on a rock in mid stream making a meal of a small Northern Pike. Most predators prefer the soft underparts of their prey, and when we investigated, head, back and tail were all that remained of the fish. The eagle having moved ahead, perched as before, but this time instead of flying on, he circled back, no doubt to continue his meal.

Is there something special about eagles that made us take this particular notice of them? There is no doubt that the sightings stirred us.

Like the howl of a Wolf on a frosty night, the call of a Loon on a northern lake, or perhaps even the presence of a chickadee at arms length in a park, the sight of the eagles seemed to create a feeling of solitude, of wilderness, probably drawing on instincts bred in primeval man when he was struggling for survival.

Are such feelings needed today? Should we be more civilized? Has modern man need of wilderness, and the wildlife that goes with it?

In an essay "Goose Music", Aldo Leopold, the noted American conservationist, poses a question. "What is a wild goose worth?"

In his evaluation of material progress there is a significant answer. "When the last corner lot is covered by tenements, we can still make a playground by tearing them down, but when the last antelope goes by the boards, not all the playground associations in Christendom can do aught to replace the loss."

Do the eagles and Aldo Leopold's words have a message at this time when, through technical expertise, we are able to change our landscape at will, usually for the end of economic expansion?

Ought we to consider the future of our environment before committing our natural resources irrevocably? If, by changing our countryside, we lose the eagles or any form of life, can it be replaced?

In short, what is the value of the eagle, and what he represents, to us, and to those who come after us?



Photo by John Jack, May 1971.



# The Serious Hiker

PETER M. PRESS

During recent years I have heard with increasing frequency expressions of regret by residents and visitors alike over the sad lack of hiking trails in our province. At the outset, however, I would like to dispel any suggestion that this article is aimed as an attack upon the administration of the provincial or the national parks in the province. It is more than evident that these two bodies have developed, and are developing, a programme to accommodate a diversity of traditional and relatively new recreational activities. One has only to consider the creation of Birds Hill Park. Within the immediate area of Winnipeg evidence of similar awareness of recreational needs is to be seen at the La Barriere Park and on the beautifully landscaped river banks in St. Vital, Assiniboine, and Kildonan Parks.

All of these locations are quite adequate for the Sunday afternoon's stroll, providing that one is prepared to commit one's day of rest to the often futile exercise of driving around the circuit roads, an experience that is usually enough to deter the most

hardened city driver. But for that quaint anachronism — the unsophisticate — who seeks his spiritual and physical rejuvenation in areas that are free from the appurtenances of modern civilization, what and where are his opportunities for indulging himself in his chosen form of recreation — that of walking?

For the serious hiker or "back-packer" the prospects are even gloomier. Where in the province is there the chance of undertaking long distance hikes that would require a day or so to complete? In the White-shell Provincial Park, an area of several hundreds of square miles of the most magnificent "shield" scenery, that has almost every facility from trailer parks to Hot Dog Stands, there are five marked trails, the total length of which does not exceed twenty miles. In the Riding Mountain National Park there are eight loop trails, most of which do not exceed 1½ miles in length. This park however does boast two trails that answer the true hiker's requirement — the Strathclair of some 14 miles, and the Central Trail of 45 miles. I regret



Drawn for Zoolog by R. Gillespie

that I am unable to comment on these two happy exceptions from personal experience. According to the 1972 Manitoba Vacation Handbook more trails are to be developed in the Duck and Turtle Mountain Provincial Parks. Encouraging news for the backpacker comes from the new Spruce Woods Provincial Park where the banks of the Assiniboine will provide a natural trail of appreciable length.

Although the plans for future development are encouraging, the total length of trails in Manitoba is still far from satisfactory. Dare one make comparisons with other countries? Austria, Switzerland, Germany and Holland have thousands of miles of trails. Scotland, Wales and England have a network of walking trails that are even marked on the standard 1 inch to 1 mile ordinance maps. Even if a figure of 150 miles were to be generously estimated for the total mileage of Manitoba trails, the comparison with any of the European countries is hardly impressive.

I agree with the view that points to the fact that European countries have had an appreciable longer time in which to develop their recreational resources, and that in many cases the trails that exist have been such since time immemorial. It is true that Manitoba is a growing province and as population and urbanization increase, so will the demands upon potential recreational areas. Are there not abundant indications of this tendency already?

It is axiomatic to state that Time is the ultimate example of an expendable resource. It is my contention that recreational facilities in general, and hiking trails specifically, should be developed with all urgency before the inexorable march of "progress" denies

us, and future generations of Manitobans, that which should be considered a birthright. Just think how pleasant it would be for us and for our children had the City Fathers of a century ago created "rights of way" along the banks of the Red and the Assiniboine, so that a belt of continuous parkland similar to those delightful stretches near Churchill Drive and Wildwood could have been perpetuated. Had a modicum of planning been exercised when the Whiteshell Park was laid out, trails could have been blazed throughout the entire system of lakes and rivers long before the establishment of the "satellite villages" that now restrict access to many, if not most, of the lakes and rivers in the park.

In conversation with many people concerned with parks planning and management, I have learned that hiking trails are being planned for the future. However the question of expense is invariably raised as an obstacle. From my lay perspective the cost of developing trails seems minimal. The only cost as I see it would be the provision of unobtrusive markers along the routes, and for the publication of trail guides for each park. I see no need for money to be spent on extensive trail cutting or for surfacing them, indeed, any path that is cut wider than that required for one person to pass should be positively discouraged for very obvious reasons — access to these routes by any mechanical contrivances would surely defeat the whole conception.

In discussing my phobia with interested parties I have received an abundance of excellent suggestions. I have learned that in many of the forest preserves there already exists a considerable number of old logging trails, fire breaks, abandoned section

roads, and settlement trails, that could be easily and cheaply linked to provide an extensive system of backpacking routes. Lorne Wallace, the President of the Manitoba Naturalists Society, suggested the re-blazing of the old Dawson Trail — an imaginative project that would please the hiker and provide a valuable link with our province's past. There is another delightful walk that passes through some beautiful Aspen parkland to the south of the Shoal Lakes. Harold Hosford told me, several years ago, that this track was the route taken by the early settlers on their way to the Interlake country.

I am quite aware that there will be a host of objections to my thought on this subject. Many of the ideas expressed here will be dismissed as impractical, whilst others will affect the rights of property owners. The reaction of the forestry department can be readily anticipated: with very good reason it would actively discourage irresponsible and responsible people from wandering in the preserves because of fire hazard. Again, there are bound to be legal entanglements when and if the government attempted to establish or re-establish rights of way. Even so it seems paradoxical to me that the hiker in our province is, more often than not, denied the opportunity to roam at will without offending the laws of trespass. It is absolutely frightening to speculate on the degree of curtailment of freedom that will inevitably come to pass within the next twenty or so years.

Those free spirits — the canoeists — can shrug off civilization with a few strokes of the paddle. The fisherman can find his solitude, providing that he has a boat, within a few minutes. As one who likes to walk, I find it difficult to believe that in order to

escape the bustle of the city and seek the peace of the wilderness one needs to be almost totally mechanized. Hiking is after all man's most natural activity, and the Great Outdoors is surely his natural habitat. Can we be sure that future generations of Manitobans will be able to enjoy this basic freedom?



# International Zoo Yearbook

Edited by Joseph Lucas and

Nicole Duplaix-Hall

Published by

The Zoological Society of London

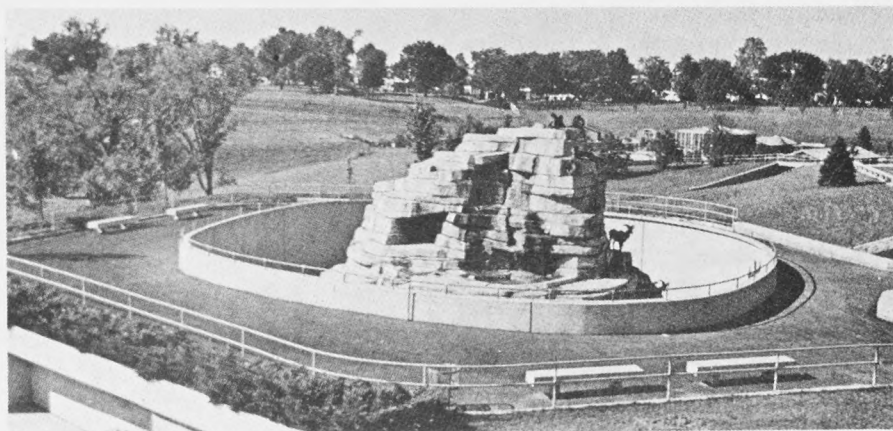
The **Yearbook** is an indispensable publication for everyone concerned with the care, conservation, biology, behaviour and pathology of wild animals. It enables zoo people, zoologists, conservationists, veterinarians and anyone interested in wild animals to keep up to date with new developments and research in the zoo field. It is the authoritative record of the zoo world and a unique source of valuable zoological data.

The **Yearbook** is bought by zoos, universities, museums, research organizations, libraries and private individuals throughout the world.

The **Yearbook** consists of three main sections. Each year **Section 1** is devoted to a special topic (South American primates in captivity in Volume 12). **Section 2**, New developments in the zoo world, includes subjects such as Architecture and Display Techniques, Breeding, Conservation, Education, Husbandry

and Research, and Veterinary work and Zoos. **Section 3**, the reference section, provides detailed information on the zoos, aquaria and bird parks of the world; species of vertebrates bred in captivity during the previous year (in each case the names of the institutions where the species was bred is given); an annual census of rare animals, including endangered species listed in the *IUCN Red Data Books*; zoo associations and federations and a list of studbooks for rare species of wild animals in captivity.

The **Yearbook** sponsors international surveys. Those already undertaken include restraint of animals with tranquillizer drugs, international quarantine regulations, animal milk analyses, breeding seasons of mammals in captivity, mammalian, reptilian and amphibian longevity records, gestation periods and marking techniques for individual animals in captivity.



## Order form

Please ignore if you already have a standing order:

Orders can be sent to a bookseller or direct to: Publications Department (IZY)  
The Zoological Society of London  
Regent's Park, London NW1 4RY England.

..... copies Volume 12  
hardbound £8.00/\$21.00 per copy  
paperback £6.00/\$15.75 per copy

..... copies Volume 11  
£7.75/\$20.30 per copy

..... copies Volume 10  
£7.00/\$18.34 per copy

..... copies Volume 9  
£6.50/\$17.03 per copy

..... copies Volume 8  
£6.50/\$17.03 per copy

..... copies Volume 7  
£6.50/\$17.03 per copy

..... copies Volume 6  
£6.50/\$17.03 per copy

..... copies Volume 5  
£6.50/\$17.03 per copy

**Reprint Editions:** Orders to Johnson Reprint Co. Ltd., 24-28 Oval Road, London NW1 7DD or 111 Fifth Avenue, New York, NY 10003, USA.

Volumes 3, 4: £9.00/\$20.00\*. Volume 2: £7.75/\$18.00\*. Volume 1: £6.50/\$15.00.

The lower dollar price is applicable only to customers in the USA ordering through the Johnson Reprint Co., New York. European and overseas customers must pay the sterling price shown or its equivalent in local currency.

Name \_\_\_\_\_

Address \_\_\_\_\_

\* I enclose £            /\$ (US)

\* Please charge to my account

\* delete as necessary

European customers outside UK  
please add £1.00/\$2.62 for postage and  
handling. USA and overseas customers  
please add £1.50/\$3.92.

## Press opinions

### Volumes 1-5

'On voit donc que l'intérêt de ces volumes dépasse largement le cadre que pourrait leur assigner leur titre. Ils doivent être consultés avec soin par tous les mammalogistes qui y trouveront une foule de faits intéressants.'

Prof. F. Bourlière, *La Terre et la Vie*, 3

### Volume 6

'The Yearbook has now become a journal of international repute quite indispensable to all concerned with the scientific basis, theory and practice of keeping animals in captivity for education, research or display.'

Dr W. H. Thorpe, *Nature, London*: 212 (5062)

### Volume 7

'With each successive year the *International Zoo Yearbook* becomes more indispensable to all workers in zoological parks, museums, and conservation'.

Dr J. F. Eisenberg, *Journal of Mammalogy* 48 (4)

### Volume 8

... should be not only accumulated as a standard reference work for zoological parks and any institution concerned with animal life, but especially by high schools and university libraries'.

Ray Pawley, *American Association of Zoological Parks and Aquariums Newsletter*

### Volume 9

'This useful series of zoo yearbooks is aimed primarily at the zoo world, but it should be read and kept for reference by a much wider range of zoologists studying species in the wild and in captivity'.

*Nature, London* 221 (1080)

### Volume 10

'The *International Zoo Yearbook*, now in its tenth triumphant year, gets better and better, growing in quality rather than size. As it receives more support from academic zoologists, it begins to provide the practical zoo man with the intellectual ballast which his profession sorely needs ...

*Science*, 168: 725

### Volume 11

'This is without doubt a unique publication which will find a place in a wide variety of libraries and scientific establishments where its value will be proved many times over in the way of a good reference book'.

*Laboratory Equipment Digest*, 9 (9)

